

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

LIQUID DYNAMICS CORPORATION,)	
Plaintiff,)	
)	Civil Action No.: 01 C 6934
v.)	
)	Suzanne B. Conlon, Judge
VAUGHAN COMPANY, INC.,)	
Defendant.)	
)	
)	

MEMORANDUM OPINION AND ORDER

BACKGROUND

Liquid Dynamics Corporation and Vaughan Company, Inc. are competitors in the production of slurry tanks used to mix organic waste products. The parties have engaged in a seven year war of attrition over Liquid Dynamics' patent on the structure of slurry tanks for mixing waste water and manure to ensure uniform suspension of heavy solid particles. Liquid Dynamics claimed Vaughan's components for mixing tanks infringed its patent; Vaughan counterclaimed patent invalidity and inequitable conduct. This court granted summary judgment of non-infringement in Vaughan's favor and dismissed its counterclaims as moot. *Liquid Dynamics Corp. v. Vaughan Company*, No. 01 C 6934, 2002 U.S. Dist. LEXIS 14102, 2002 WL 1769979 (N.D.Ill. July 31, 2002). That decision was reversed. *Liquid Dynamics Corp. v. Vaughan Co., Inc. ("LD I")*, 355 F.3d 1361, 1371 (Fed. Cir. 2004).

On remand, a jury found this patent valid and willfully infringed, returning a \$1,183,722 verdict against Vaughan. This court then held a bench trial on Vaughan's allegation of inequitable conduct; Liquid Dynamics prevailed. This court trebled the jury's verdict and awarded attorney's

fees of \$1,501,239. Of import here, the court entered a permanent injunction against Vaughan restraining its use of the 47 mixing systems adjudicated at trial, as well as any colorable imitation. The jury's verdict and this court's rulings were affirmed. *Liquid Dynamics Corp. v. Vaughan Co.* ("LD II"), 449 F.3d 1209 (Fed. Cir. 2006). But this case did not end there.

Liquid Dynamics brought a second case alleging Vaughan's continued infringement of the same patent. *Liquid Dynamics Corp v. Vaughan Co., Inc.*, No. 06 C 5611 (N.D. Ill.) (Kennelly, J.). Subsequently, Liquid Dynamics filed a contempt motion seeking compensatory damages and attorneys' fees for violation of the permanent injunction based on the same allegations asserted in the pending patent infringement case. The contempt motion was referred to a magistrate judge for a report and recommendation. Liquid Dynamics objects to the recommendation that its motion for a contempt proceeding be denied.

DISCUSSION

I. The Magistrate Judge's Report and Recommendation

Given the protracted and contentious history of this litigation, the magistrate judge was confronted with a formidable task. The record reflects extraordinary care and thoughtfulness. Extensive briefing occurred before and after a five-day evidentiary hearing. The challenged 47-page report and recommendation fully addresses the protracted and complex history of the case, the evidentiary issues raised by the contempt motion, and the applicable legal standard.

The magistrate judge found Liquid Dynamics failed to satisfy its burden to show by clear and convincing evidence that 22 Vaughan systems (not addressed at trial) violate the permanent injunction. Specifically, the report concluded Liquid Dynamics failed to establish that the Vaughan systems now in issue are colorable imitations of the adjudicated infringing systems, which were the

subject of the permanent injunction. Accordingly, the magistrate judge found a contempt proceeding was inappropriate. The magistrate judge declined Vaughan's invitation to conclude that its 22 presently accused systems are non-infringing.

II. Legal Standard

Objections to a magistrate judge's report and recommendation are reviewed *de novo*. 28 U.S.C. § 636(b)(1)(C); Fed. R. Civ. P. 72(b). A federal court may enforce an injunction by use of its contempt power. 18 U.S.C § 401(3). The contempt power should be exercised with restraint and only under compelling circumstances. To establish that contempt proceedings are appropriate, Liquid Dynamics bears the heavy burden of proving by clear and convincing evidence that Vaughan violated the permanent injunction. *KSM Fastening Sys., Inc. v. H. A. Jones Co., Inc.*, 776 F.2d 1522, 1524 (Fed. Cir. 1985).

The core issue here is whether Liquid Dynamics' accusation regarding Vaughan's redesigned mixing tanks should be resolved by a summary contempt proceeding or in the pending patent infringement case. This motion and the pending infringement case are based on identical allegations. The magistrate judge applied the correct legal standard. A contempt rule to show cause should not issue if there are substantial open issues of infringement raised by Vaughan's 22 presently accused mixing systems. *Additive Controls & Measurement Sys., Inc. v. Flowdata, Inc.*, 154 F.3d 1345, 1349 (Fed. Cir. 1998). Open issues of infringement exist if there is more than a colorable difference between Vaughan's presently accused 22 systems and the 47 infringing systems that were in issue at trial. *Abbott Labs v. Torpharm, Inc.*, 503 F.3d 1372, 1380 (Fed. Cir. 2007).

III. The Objections

It is undisputed that Vaughan's 22 accused systems are not exact duplicates or clones of the 47 adjudicated infringing systems. Pl. Objs. at 5. Rather, Liquid Dynamics contends the structural differences between the accused and adjudicated systems are minor, and that the accused systems have the "substantial helical flow" claimed in its patent. The record reflects, however, that Liquid Dynamics failed to establish these essential propositions by clear and convincing evidence.

1. Notice of the permanent injunction

The permanent injunction ordered Vaughan to notify its officers, agents, servants, employees and attorneys, as well as "parties in active concert or participation with them in the manufacture, marketing, sales and use of [the enjoined] mixing systems." Objs., Ex. 2. The systems enjoined included mixing systems that employ the design, placement and orientation of nozzle assemblies "... used by the 47 mixing systems found to infringe Claims 1 and 8 of [Liquid Dynamics'] U. S. Patent No. 5,458,414, as well as colorable imitations of the infringing systems." *Id.*

Preliminarily, Liquid Dynamics contends the magistrate judge erred by not addressing the argument that Vaughan violated the permanent injunction because it failed to provide notice to its customers and consulting engineers for the 22 presently accused systems. It is undisputed that the accused systems were in production before the injunction issued. Liquid Dynamics asserts that customers and consulting engineers, who plan and oversee Vaughan's projects, acted in concert with Vaughan in the manufacture and use of the 22 presently accused systems. *See, e.g., Black & Decker, Inc. v. Robert Bosch Tool*, No. 04 C 7955, 2006 U.S. Dist. LEXIS 94554 at *8 (N.D. Ill. Dec. 27, 2006) (St. Eve, J.) (rejecting argument customers are not "in active concert or participation" with defendant).

Vaughan responds that it was not error for the magistrate judge to omit a ruling on this issue because the report concluded the 22 accused systems were not subject to the injunction nor were they colorable imitations of the 47 enjoined systems. In addition, Vaughan cites evidence of record that it gave notice of the permanent injunction to all required persons, but not to end-users who had no contractual privity with Vaughan. Tr. 9/18 at 105-06; DX 3,4; Resp. to Objs. at 9, fn. 2.

Vaughan misreads the magistrate judge's conclusion about the inapplicability of the injunction. The report and recommendation did not conclude the injunction was inapplicable to Vaughan's 22 accused systems. Rather, the report found Liquid Dynamics failed to present clear and convincing evidence that the 22 accused systems were mere imitations of the 47 infringing systems, and that there was a substantial open issue whether Vaughan's 22 accused systems infringe Liquid Dynamics' patent.

2. Factual dispute between the experts

Liquid Dynamics challenges the report's conclusion that "there is a substantial open question whether the accused systems contain an element of the patent, the element of substantial helical flow, and that question should not be determined in a contempt proceeding." Report and Recommendation ("R & R") at 39. According to Liquid Dynamics, this conclusion was erroneous because it was just based upon a disagreement between the parties' experts about the proper construction of the patent element "substantial helical flow," and that Vaughan's expert applied a legal standard incompatible with the Federal Circuit's construction of that term. Liquid Dynamics' arguments are unsupported by the record.

The magistrate judge found there was a factual issue whether the accused systems had a substantial helical flow as defined in the patent and construed by the Federal Circuit in the summary

judgment appeal. This finding was based on evidence of significant differences between Vaughan's adjudicated infringing systems and the accused systems because of structural and design differences, flow simulation evidence, torque values and Reynolds numbers. *See, e.g.*, R & R at 26-28, 35-39; Tr. 9/18 at 72-73, 136-137, 139-140, 180; Tr. 7/31 at 275-281, 290; Tr. 9/19 at 214, 272, 274, 292-293, 305-308, 360-361; PX 48, 123; DX 87, 88, 90, 164. The accused systems do not employ the nozzle design, placement and orientation used in the adjudicated systems; and Liquid Dynamics' own experts conceded that these changes could potentially change the flow pattern, although they were of the opinion "the differences were not great enough to make a significant change." R & R at 35. While Mr. Gillete testified the accused systems were functionally the same as the adjudicated systems, his opinion was based on experience, not by objective scientific tests or data. *Id.* at 36. Vaughan's expert countered that the generally higher torque and Reynolds numbers in the accused systems showed a significant difference with the adjudicated system.

The magistrate judge acknowledged that Liquid Dynamics' expert Dr. Lueptow testified that structural differences between the two systems would not result in different flow patterns; but she concluded his testimony did not meet the clear and convincing standard, given the equivocal nature of some of his testimony and Vaughan's conflicting evidence. *Id.* at 36-37; Tr. 9/18 at 72, 73. Dr. Lueptow's opinion that vertical vector plots supported his opinion about a substantial helical flow is a matter of disputed interpretation properly resolved by the trier of fact. R & R at 37, citing the Federal Circuit's post-trial opinion in this case, 449 F.3d at 1222. The magistrate judge correctly did not resolve these factual conflicts, but rather concluded the conflicting evidence raised substantial factual issues about an element of the patent that should not be determined in a summary

contempt proceeding. Liquid Dynamics simply did not satisfy its burden to show by clear and convincing evidence that the accused systems violated the permanent injunction.

Liquid Dynamics fails to cite any basis in the record for its conclusory assertion that the testimony of Vaughan's expert should have been excluded because his opinions were based on an incorrect claim construction of the patent. Dr. Graf did not opine about the construction of patent claims, but rather that the data did not support a conclusion the accused systems had a substantial helical flow. *See, e.g.,* R & R at 32-35. It was not an abuse of discretion to allow Dr. Graf to testify. The fact that he was also of the opinion that the adjudicated systems did not generate helical flow, while contrary to the jury verdict, was not engaging in claim construction, Dr. Graf interpreted data. His earlier opinion may inform the weight given his testimony, not its admissibility.

3. The "Colorable Differences" Legal Standard

Liquid Dynamics argues that the magistrate judge erroneously relied upon differences between the accused and the adjudicated systems. This argument ignores the focus of the report and recommendation: whether Liquid Dynamics offered clear and convincing evidence that Vaughan's accused mixing systems violated the permanent injunction. According to Liquid Dynamics, it was undisputed that "... the accused systems were not exact duplicates or 'clones' of the 47 adjudicated system." Pl. Objs. at 5. Rather, it was Liquid Dynamics' theory that the structural differences between the accused and the adjudicated systems were minor and within the scope of the patent claims, specifically the claimed "substantial helical flow." *Id.* Liquid Dynamics framed these issues, but failed to satisfy its heavy burden of persuasion. As Liquid Dynamics recognizes in its objections, under Federal Circuit precedent, the court "... must compare the infringing product and the newly-accused product to determine if there are more than 'colorable' differences between the two" to

determine whether the new product raises substantial open issues of infringement, that rendering a contempt proceeding inappropriate. Pl. Objs. at 7, quoting *Stryker Corp. v. Davol, Inc.*, 234 F.3d 1252, 1260 (Fed. Cir. 2000). The magistrate applied the correct legal standard.

4. Vertical Vector Plot Evidence

Liquid Dynamics argues that the report and recommendation incorrectly “discards” PX 54, which contained vertical velocity vector plots relating to flow patterns prepared by its expert, Dr. Lueptow, for each accused system using Vaughan’s electronic data. “Discard” is a remarkable term to apply to the careful analysis and weighing of evidence. The magistrate judge found that PX 54 and “. . . testimony based on it cannot form a reliable basis for any conclusions about the flow patterns in the accused tanks . . . because Dr. Lueptow effectively disclaimed that exhibit.” R & R at 38. Liquid Dynamics contends this evidence was critical to establish substantial helical flow, citing *LD II*, 449 F.3d at 1222.

An examination of the report and recommendation shows this objection is baseless. The magistrate judge was guided by the Federal Circuit’s holding that Dr. Lueptow’s interpretation of similar evidence at trial was subject to different interpretations. *Id.* The magistrate judge found Exhibit 54 unreliable because Dr. Lueptow testified that the settings used to create that exhibit were “substantially different from any . . . physically realistic velocity in the tank.” Tr. 8/1 at 448. Because of his own doubts about the reliability of the PX 54 simulations, Dr. Lueptow created new simulations. *Id.* at 438-442. Contrary to Liquid Dynamics’ argument that PX 54 was “discarded,” the magistrate judge considered all evidence related to vector plots in detail. Her determination of PX 54’s unreliability is amply supported by the record.

5. Modeling of flow patterns

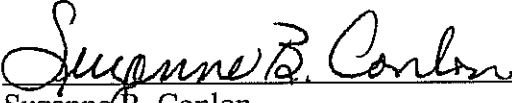
Liquid Dynamics complains the report and recommendation incorrectly rejected PX 13, which represented flow patterns from simulations of representative tanks in issue at trial. The same evidence was admitted at trial and considered by the Federal Circuit as evidence supporting the jury's verdict. *LD II*, 449 F.3d at 1218. Liquid Dynamics ignores the fact that PX 13 was admitted into evidence at the hearing, and the magistrate judge analyzed this evidence in the context of PX 123. She found that the accused systems' flow patterns are substantially different from the models used by Dr. Lueptow. R & R at 39; PX 123 (appended to the report and recommendation); *see also* R & R at 28, discussing PX 13. It is significant that Dr. Lueptow did not testify the flow patterns of the accused and adjudicated systems were the same or even similar. R & R at 39, fn 18.

The magistrate judge not only admitted PX 13 into evidence, but the report and recommendation considered all Liquid Dynamics' flow pattern evidence. The conclusion that this evidence was not clear and convincing is supported by the record.

CONCLUSION

Liquid Dynamics' objections to the report and recommendation lack merit. There was a failure to establish by clear and convincing evidence that Vaughan's accused mixing systems are a colorable imitation of the adjudicated systems subject to this court's permanent injunction. There is at least one substantial open issue of infringement established by the evidence before the magistrate judge. Accordingly, a contempt proceeding is inappropriate.

ENTER:


Suzanne B. Conlon
United States District Judge

October 20, 2008